

1. Amendments to Claims and Specification/New Matter

Claim 1 has been amended to recite the embodiment of Figs. 3-5, in which the support member (4,5) has an annular portion that faces and supports the rotation shaft. In addition, claim 1 has been amended to recite that the support member is a single support member, and the corresponding description of Fig. 3 on pages 4-5 of the specification has been amended to provide antecedent support for the amended claim language.

Because the singleness of the support member, and the feature wherein the annular portion of the support member faces the shaft, are clearly illustrated in the original drawings, it is respectfully submitted that the amended claim language does not constitute "new matter."

2. Rejection of Claims 1, 2, 4, and 7 Under 35 USC §102(b) in view of U.S. Patent No. 4,517,480 (Muller)

This rejection is respectfully traversed on the grounds that the Muller patent fails to disclose a single non-metallic rotation shaft support member having an annular wall that faces a radial surface of the shaft, as is now claimed. Instead, the support member 19 of Muller is planar, with no annular wall facing the shaft.

The combination of the metallic seal with a non-metallic support member having an annular wall, as illustrated in Figs. 3-5 of the present application, provides added stability without increasing friction noise relative to the arrangement shown in Muller.

Because the Muller patent fails to disclose or suggest various elements of the invention as presently claimed, it is respectfully submitted that the Muller patent does not *anticipate* the claimed invention, and withdrawal of the rejection under 35 USC §102(b) is respectfully requested.

Serial Number 10/029,271

3. Rejection of Claims 5 and 6 Under 35 USC §103(a) in view of U.S. Patent Nos. 4,517,480 (Muller) and 5,982,064 (Umeda)

This rejection is respectfully traversed on the grounds that the Umeda patent, like the Muller patent, fails to disclose the claimed annular wall, and further fails to disclose a metallic seal in combination with the non-metallic support member. While Umeda's support member may have a cup or bowl shape, no part of it is "annular." Therefore no combination of Muller and Umeda could have suggested the claimed invention, and withdrawal of the rejection under 35 USC §102(b) is respectfully requested.

4. Rejection of Claim 3 Under 35 USC §103(a) in view of U.S. Patent Nos. 4,517,480 (Muller) and 3,777,191 (Papst)

This rejection is respectfully traversed on the grounds that the Papst patent, like the Muller patent, discloses a planar support member without an integral annular wall, as claimed. As a result, no combination of the Muller and Papst patents, whether considered individually or in any reasonable combination, could have suggested the claimed invention, and withdrawal of the rejection under 35 USC §103(a) is respectfully requested.

Having thus overcome each of the rejections made in the Official Action, withdrawal of the rejections and expedited passage of the application to issue is requested.

Respectfully submitted,

BACON & THOMAS, PLLC



Date: August 19, 2002

By: BENJAMIN E. URCIA
Registration No. 33,805

BACON & THOMAS, PLLC
625 Slaters Lane, 4th Floor
Alexandria, Virginia 22314
Telephone: (703) 683-0500

NWB:S:\Product\New\Pending A...1101010RNG 029271\601.wpd

APPENDIX A
(Clean Copy Of Amended Claims)

a' 1. (Amended) A rotation shaft support structure of a motor, comprising:

a shaft tube, having an inner wall provided with at least one bearing in which a rotation shaft may be rotated;

a seal member, made of metallic material and securely combined with one end of the shaft tube; and

a single support member, made of a wear resistant non-metallic material, mounted in the one end of the shaft tube, and supported by the seal member, the support member having a resting portion which has an integral periphery provided with an annular wall adapted to face a radial surface of the rotation shaft for supporting the rotation shaft while one end of the rotation shaft rests on the resting portion.

APPENDIX B
(Marked-Up Copy Of Amended Claims)

1. (Amended) A rotation shaft support structure of a motor, comprising:

a shaft tube, having an inner wall provided with at least one bearing in which a rotation shaft may be rotated;

a seal member, made of metallic material and securely combined [on] with one end of the shaft tube; and

a single support member, made of a wear resistant non-metallic material, mounted in the one end of the shaft tube, and supported by the seal member, the support member having a resting portion which has [a] an integral periphery provided with an annular wall [, and] adapted to face a radial surface of the rotation shaft for supporting the rotation shaft while one end of the rotation shaft [being rested] rests on the resting portion.

APPENDIX C
(Clean Copy Of Amended Paragraphs)

Page 4, lines 18-20:

a2 Referring to Figs 3 and 4, a rotation shaft support structure of a motor in accordance with a second embodiment of the present invention comprises a shaft tube 1, a seal member 2, and a single support member 4.

Page 5, lines 1-7:

a3 The support member 4 is made of a wear resistant non-metallic material. The support member 4 is placed in the recess 21 of the seal member 2. The support member 4 is formed with a cup-shape or a bowl-shape. The bottom of the support member 4 has an integral periphery provided with an annular wall 42 that faces a radial surface of the rotating shaft 10. The area circled by the annular wall 42 of the support member 4 is slightly greater than the outer diameter of the rotation shaft 10.

APPENDIX D
(Marked-Up Copy Of Amended Paragraphs)

Page 4, lines 18-20:

Referring to [Fig.] Figs 3 and 4, a rotation shaft support structure of a motor in accordance with a second embodiment of the present invention comprises a shaft tube 1, a seal member 2, and a single support member 4.

Page 5, lines 1-7:

The support member 4 is made of a wear resistant non-metallic material. The support member 4 is placed in the recess 21 of the seal member 2. The support member 4 is formed with a cup-shape or a bowl-shape. The bottom of the support member 4 has [a] an integral periphery provided with an annular wall 42 that faces a radial surface of the rotating shaft 10. The area circled by the annular wall 42 of the support member 4 is slightly greater than the outer diameter of the rotation shaft 10.